

engineering data service

electronic products

SYLVANIA

2C37

DESCRIPTION: ULTRA-HIGH-FREQUENCY GENERAL PURPOSE TRIODE

TYPE 2C37

This type was designed primarily for use as a c. w. oscillator at frequencies up to 3300 mc. It can also be used for amplifier and frequency-multiplier applications.

The 2C37 is similar in appearance to the 2C36, but has no internal feedback.

RATINGS AND CHARACTERISTICS

ELECTRICAL RATINGS

Heater voltage (A.C. or D.C.)	6.3 volts
Heater current	0.4 amperes
Maximum plate voltage	350 volts D.C.
Maximum plate dissipation	6.0 watts
Maximum seal temperature	175 degrees C.
Maximum operating frequency	3300 megacycles
Direct Interelectrode Capacitances (Average)	
Grid-plate	1.35 microfarads
Grid-cathode	1.30 microfarads
Plate-cathode	.025 microfarads

TUBE CHARACTERISTICS

CONDITIONS

Heater voltage	6.3 volts
Heater current	0.4 amperes
Plate voltage	180 volts D.C.
Cathode bias resistor	400 ohms
Plate current	12.0 milliamperes D.C.
Transconductance	4500 micromhos
Amplification factor	25
Grid voltage for I_b = 10 microamperes D.C.	—28.0 volts D.C.

TYPICAL OPERATING CONDITIONS

(1) UHF Oscillator CW

Plate voltage	150 V DC
Plate current	15 ma DC
Grid resistor	3000 ohms
Frequency	1000 mc
Power output	500 mw

(2) UHF Oscillator CW

Plate voltage	150 V DC
Plate current	25 ma DC
Grid resistor	100 ohms
Cathode resistor*	100 ohms approx.
Frequency	3300 mc
Power output	200 mw min.

**Adj. for rated plate current*

(3) UHF Oscillator CW

Plate voltage	200 V DC
Plate current	25 ma DC
Grid resistor	100 ohms
Cathode resistor*	100 ohms approx.
Frequency	3300 mc
Power output	450 mw min.

**Adj. for rated plate current*

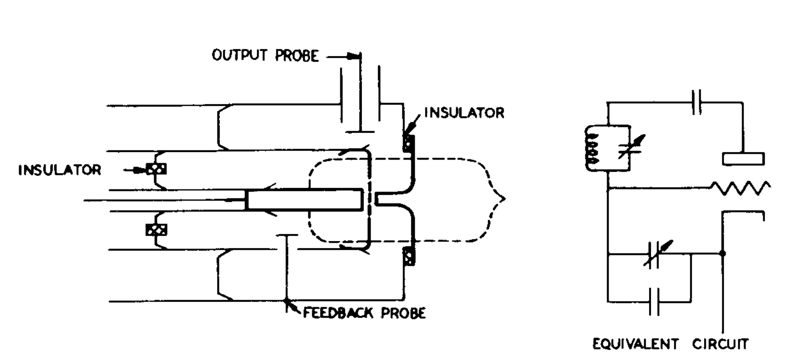
(4) Pulse Operation

Plate voltage (peak)*	1500 volts
Frequency	3300 mc
Power output (peak)*	175 watts
Peak emission**	1500 ma min.

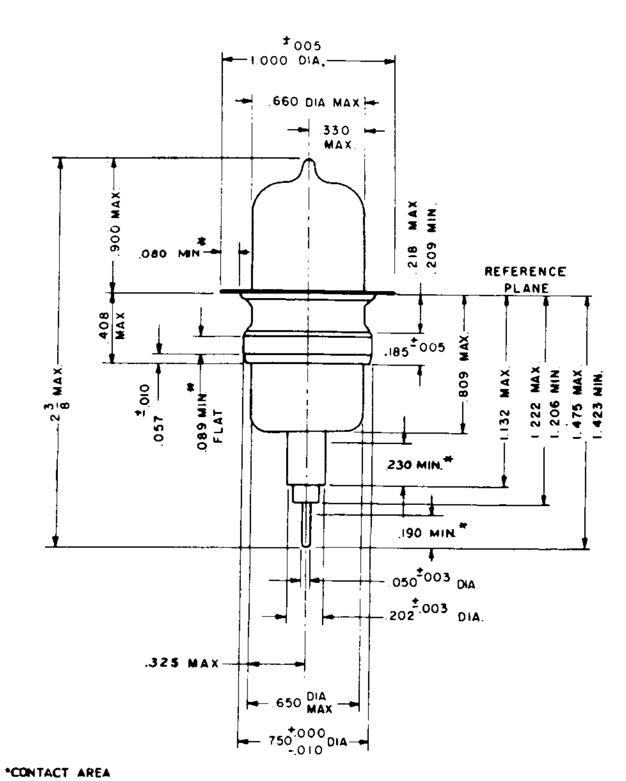
**Test Conditions:* Pulse width = 1 μsec
Pulse rep. rate = 2000 pps.

***Test Conditions:* Plate voltage (peak) = 100V.
Pulse width = 3 μsec
Pulse rep. rate = 500 pps.

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A TYPE 2C37 IN A TYPICAL QUARTER-WAVE CONCENTRIC-LINE CIRCUIT. AN EXTERNAL PROBE PROVIDES THE FEEDBACK NECESSARY FOR OSCILLATION. IF THE TUBE IS USED AS AN AMPLIFIER, THE FEEDBACK PROBE MAY BE REMOVED AND A LOOP OR PROBE CONNECTED TO THE INPUT LINE.



*CONTACT AREA

OUTLINE DRAWING

